

**Claims:**

- 1                   1. A system comprising:
  - 2                   a radio modem unit; and
  - 3                   an RF signal booster unit, wherein the booster unit is connectable to
  - 4                   the RF signal booster unit with a connector adapted to transmit RF signals,
  - 5                   wherein a DC offset at the connector is detected to determine whether the booster
  - 6                   unit is connected to radio modem.

1 2. The system of Claim 1, wherein the connector connects to a  
2 connection line between the radio modem unit and the booster unit.

1                   3. The system of Claim 1, wherein the offset detection circuitry is  
2 located within the radio modem unit.

1                   4. The system of Claim 1, wherein the offset detection circuitry  
2 includes an inductor to allow the DC offset to be placed onto the connector, but  
3 not allow radio frequency energy to pass up into the auto-detect circuit.

1                   5. The system of Claim 1, wherein the booster unit includes an  
2 element to reduce the DC power level to low if the radio modem unit is connected  
3 to the booster unit.

1                           6. The system of Claim 5, wherein the elements in the booster unit  
2    include an inductor.

1                   7. The system of Claim 1, wherein the voltage at the connector of the  
2 radio modem unit is high if no booster unit is connected but is low if a booster unit  
3 is connected.

2                   a radio;  
3                   an RF signal connector operably connected to the radio, the connector  
4                   being connectable to a RF antenna or a booster unit; and  
5                   a detector unit adapted to detect a DC offset at the connector to  
6                   determine whether the connector is connected to a booster unit.

1                   9. The radio modem unit of Claim 8, wherein the connector is  
2                   connectable to a connector line which can connect the radio modem unit to a  
3                   booster unit.

1                   10.       The radio modem unit of Claim 8, wherein the DC offset of  
2                   the connector is high if no booster unit is connected but is low if a booster unit is  
3                   connected.

1                   11.       The radio modem unit of Claim 8, wherein an inductor is  
2                   used as part of an auto-detect circuit.

1                   12.       The radio modem unit of Claim 8, wherein the radio modem  
2                   unit is connected to a booster unit, the booster unit including a circuit to pull the  
3                   DC offset at the connector to low.

1                   13.        A system comprising:  
2                   a radio modem unit; and  
3                   an RF signal booster unit, wherein the booster unit is connectable to  
4                   the RF signal booster unit with a connector adapted to transmit RF signals,  
5                   wherein baseband signals transmitted to the connector by the radio modem are  
6                   used by the booster unit to prepare for transmission.

1                   14.        The system of Claim 13, wherein a connector line is  
2                   connected between the connector at the RF signal booster unit to a connector at the  
3                   radio modem unit.

1                   15.        The system of Claim 13, wherein the baseband signals are  
2                   power control signals.

1                   16.        The system of Claim 13, wherein the power control signals  
2                   are used to control the power and channel.

1                   17.        The system of Claim 13, wherein the RF signal booster unit  
2                   includes a switch in the transmit line that prevents RF energy from being provided  
3                   to a power amplifier in the booster unit until a valid power controller message is  
4                   received from the radio modem.

1                   18.        The system of Claim 13, wherein DC offset signals are sent  
2                   between the radio modem and booster unit to indicate whether the radio modem  
3                   unit is connected to the booster unit.

1                   19.        An RF signal booster unit adapted to amplify RF signals  
2                   from a radio modem, the booster unit includes a switch that significantly attenuates  
3                   the RF energy from the radio modem that is provided to a power amplifier in the

4 booster unit until a valid power control message is received from the radio  
5 modem.

1 20. The RF signal booster unit of Claim 19, wherein the switch  
2 includes a pair of diodes.

1 21. The system of Claim 20, wherein the current flows through  
2 the diodes, the RF impedance of the diodes is reduced, turning the switch to  
3 closed, but when current is not flowing through the diodes, the RF impedance of  
4 the switch is high.

1 22. Method of using a radio modem unit and an RF signal  
2 booster unit, the booster unit and radio modem unit connectable using a connector,  
3 the method comprising:

4 in the radio modem unit, detecting a DC offset on the connector to  
5 determine whether the booster unit is connected;

6 if the booster unit is connected, transmitting baseband signals on the  
7 connector from the radio modem to the booster unit to allow the booster unit to  
8 prepare for transmission; and

9 thereafter, transmitting an RF signal on the connector from the radio  
10 modem to the booster unit.

1                   23.        The method of Claim 22, wherein the connector line  
2 connects between the radio modem unit and an RF signal booster unit.

1                   24.        The method of Claim 22, wherein the baseband signal is the  
2 power control signal.

1                   25.        The method of Claim 24, wherein the power control signal  
2 includes a channel control and power level indications.